



**NAVFAC**  
Naval Facilities Engineering Command

**ENGINEERING SERVICE CENTER**  
Port Hueneme, California 93043-4370

**TECHNICAL REPORT**  
**TR-2259-ENV**

**NAVY TOTAL MAXIMUM DAILY LOAD (TMDL)**  
**GUIDANCE**

by

Navy TMDL Discussion Group

February 2005

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REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0811	
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1. REPORT DATE (DD-MM-YYYY)		2. REPORT TYPE		3. DATES COVERED (From – To)	
February 2005		Final			
4. TITLE AND SUBTITLE <b>NAVY TOTAL MAXIMUM DAILY LOAD (TMDL) GUIDANCE</b>			5a. CONTRACT NUMBER		
			5b. GRANT NUMBER		
			5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S) David Cotnoir (LANTDIV) Chris Wallace (LANTDIV) Davika Misir (PSGS)			5d. PROJECT NUMBER		
			5e. TASK NUMBER		
			5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESSES NAVFAC Atlantic Division (LANTDIV) Perot Systems Government Services (PSGS) Naval Facilities Engineering Service Center (NFESC)			8. PERFORMING ORGANIZATION REPORT NUMBER TR-2259-ENV		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Naval Facilities Engineering Command 1322 Patterson Avenue, Se Suite 1000 Washington Navy Yard, DC 20314			10. SPONSOR/MONITORS ACRONYM(S)		
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.					
13. SUPPLEMENTARY NOTES NA					
14. ABSTRACT This guidance is intended to assist Navy commands in addressing regulatory issues associated with the Clean Water Act (CWA) Total Maximum Daily Load (TMDL) Program initiatives. The TMDL program is an additional mechanism within the CWA to protect waters where technology-based controls are insufficient to achieve water quality standards (WQS). Navy personnel who may benefit from this guidance include regional environmental coordinators (RECs), regional commanders and installation water program managers.					
15. SUBJECT TERMS Total Maximum Daily Load; Clean Water Act; Environmental Compliance					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			KEN KAEMPFEE
U	U	U	U	25	19b. TELEPHONE NUMBER (include area code) 805-982-4893

Standard Form 298 (Rev. 8/98)  
Prescribed by ANSI Std. Z39.18



## **ACKNOWLEDGEMENTS**

This guidance document is the final product of the vision and hard work of the primary authors Chris Wallace (LANTDIV), Dave Cotnoir (LANTDIV) and Davika Misir (PSGS). The document was refined based on the suggestions of numerous other contributors including Ron Gauthier (SPAWAR), Matt Jabloner (EFA Northwest), Giannina DiMaio (PSGS), Theresa Morley (CNRSW), Kim Parker Brown (NAVFAC HQ), Anna Collery (NAVFAC Washington), and Will Bullard (CNRMA). As a result of this team effort, the Navy will be better prepared to minimize impacts to the Navy's mission as a result of Total Maximum Daily Loads.



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## **GUIDANCE FOR ADDRESSING TMDLs**

This guidance is intended to assist Navy commands in addressing regulatory issues associated with the Clean Water Act (CWA) Total Maximum Daily Load (TMDL) Program initiatives. The TMDL program is an additional mechanism within the CWA to protect waters where technology-based controls are insufficient to achieve water quality standards (WQS). Navy personnel who may benefit from this guidance include regional environmental coordinators (RECs), regional commanders and installation water program managers.

This guidance provides information that will assist in understanding and determining the answers to the following questions:

- a. What is a TMDL and what are the current regulatory drivers?**
- b. Why should the Navy be concerned with TMDLs?**
- c. Which specific installations may be impacted by a TMDL?**
- d. What are some of the efforts currently being taken by the Navy?**
- e. Who in Navy should be involved in TMDL issues?**
- f. What can Navy personnel do to minimize the potential impacts of a TMDL?**

This guidance was prepared by the Navy TMDL Discussion Group, which is comprised of representatives from the Chief of Naval Operations (CNO), Major Claimants (MCs), Regional Commanders, Naval Facilities Engineering Command (NAVFAC), and its Engineering Field Divisions (EFD)/Activities (EFA)/Naval Facilities Engineering Service Center (NFESC). The purpose of this group is to facilitate Navy implementation and compliance with the CWA TMDL regulations. The group's main objective is to provide assistance to Navy water program managers that will minimize TMDL impacts and associated compliance costs to Navy installations. To achieve this, it is recommended that Navy water program managers coordinate with their regulatory agencies throughout the TMDL development processes.

For more information on TMDL efforts within the Navy and the Department of Defense (DoD), visit the Navy TMDL Information web site  
<https://www.denix.osd.mil/denix/DoD/Working/TMDL/tmdl.html>.

## **SECTION A: What is a TMDL and What are the Current Regulatory Drivers?**

### **What is a TMDL?**

A TMDL is the maximum amount of a particular pollutant a waterbody can receive and still meet water quality standards. A key component of the TMDL is the allocation of pollutant loadings among point and nonpoint source dischargers to the waterbody. This allocation is usually implemented through a National Pollutant Discharge Elimination System (NPDES) permit for point sources, which is mandatory, and through state and Federal nonpoint source programs, which, depending on the particular state, may be mandatory or voluntary.

Typically, allocations describe how pollutant loads are distributed among different sources in the area surrounding the waterbody. Within the context of the TMDL program, allocations are the distribution or assignment of pollutant loads to entities or sources, such that the sum of the loads does not exceed the maximum allowable load to the waterbody. Allocations are composed of *wasteload allocations* (WLAs) and *load allocations* (LAs). The WLA portion of the TMDL is assigned to existing and future point sources, and the LA is assigned to existing and future nonpoint sources including background loads. The TMDL must also account for uncertainty about the relationships between the load and water quality using a margin of safety (MOS). The MOS may be a reserved portion of the TMDL or may be provided implicitly by using conservative assumptions in the TMDL development process. Therefore, TMDL can be represented as:

$$\text{TMDL} = \sum \text{WLA} + \sum \text{LA} + \text{MOS}$$

These allocations should be technically feasible and consistent with other applicable local, state, or Federal programs (i.e., institutional constraints). In some cases, allocation options are constrained by technical feasibility, and sources must implement all possible management practices and available technologies to satisfy TMDLs or other regulatory limits. However, in other cases, regulatory limits are less constraining, and the Environmental Protection Agency (EPA) encourages the use of allocations that are based on competing measures of desirability such as cost-effectiveness, equity, and fairness. Other factors to consider when making allocation decisions include relative source contributions, ability of small entities to pay, and prior load reductions.

### **What are the Regulatory Drivers?**

TMDLs are one of many tools Congress authorized in the CWA to help achieve and maintain water quality. Specifically, under Section 303(d) of the CWA, states are required to identify and prioritize all waterbodies not meeting water quality standards, and develop TMDLs for these impaired waterbodies. State listings of impaired waterbodies are based on instream testing and assessments conducted by the states.

In 1985, the EPA issued TMDL regulations. These regulations have been revised twice, in 1992 (40 CFR 130.7) and 2000 (65 FR 43586, 13 July 2000). The 1992 regulations required

state lists to include impaired or threatened waters and the TMDL needed for each pollutant. The waters would remain listed until the TMDLs were approved and water quality achieved. The lists would be revised and re-submitted every 2 years. The 2000 regulations, which provided more detailed guidance on the TMDL development process, were withdrawn.

Currently, the 1992 regulation governs the TMDL program. However, EPA is planning to propose the Watershed Rule in the near future, which will include revisions to the 1992 requirements. States are required to proceed in the implementation of existing TMDL regulations, and many States have been sued by citizen groups to speed up the TMDL process. Time frames are aggressive for developing TMDLs, especially those established through legal actions. While most states have begun to develop TMDLs, only a small percentage of the required 40,000+ TMDLs have been completed nationwide. Additionally, as states update their 303(d) lists every 2 years as required under the current regulations, more impaired waterbodies will be identified and more TMDLs will be forthcoming.

It is recommended that Navy installations stay abreast with the Federal, state, and local regulations, as well as court orders. More information on the current status of EPA and state regulations can be found at <https://www.denix.osd.mil/denix/DoD/Working/TMDL/tmdl.html>.

## **SECTION B: Why should the Navy be Concerned with TMDLs?**

Navy installations tend to be located near surface waters, with many located in highly urbanized watersheds that have been listed as impaired by regulatory agencies. Navy point and nonpoint sources which discharge to waterbodies listed as impaired on a state's 303(d) lists are subject to discharge allocations set by TMDLs. Examples of Navy point source discharges that are potentially affected include discharges to surface waters where a NPDES permit has been issued, such as industrial wastewater treatment plants, sewage treatment plants, and facilities subject to Storm Water Phase I and II requirements (i.e.; industrial operations, construction activities, and facilities located in urbanized areas). Navy nonpoint source discharges that are potentially affected include storm water runoff from facilities in non-urban areas, as well as runoff from training grounds, installation restoration sites, forest management areas, and lands under agricultural outlease programs.

### **Direct Impact to Installations' Water Program**

Navy point source dischargers that are identified as contributors of pollutants causing impairments will likely have their discharge permits changed to incorporate new or more stringent limits for these pollutants as part of TMDL implementation. Depending on TMDL requirements, treatment devices, best management practices (BMPs) and Pollution Prevention (P2) practices will have to be put in place in order to meet the new permit limits. Navy nonpoint source dischargers will need to institute BMPs or P2 practices in order to reduce their discharge loadings. There may also be restrictions on new or expanded discharges, including both point and nonpoint source discharges. These restrictions have the potential to affect operations on Navy property.

### **Indirect Impact to Installations' Water Program**

In addition to the above noted direct impacts to Navy CWA programs, there will likely be indirect impacts from TMDLs. For smaller installations in urban areas, indirect impacts may include increases to or creation of a storm water utility fee imposed by localities where Navy discharges enter municipal storm water systems. Localities are expected to use these fees to expand storm water treatment capacity, fund public awareness initiatives, or fund enhancement and restoration projects as part of a TMDL requirement. For Navy installations that discharge wastewater to a Publicly Owned Treatment Works (POTW), indirect impacts could include higher user rates if the POTW is required to upgrade treatment capability in order to meet more stringent NPDES limits at their discharge. Other impacts to discharges to POTWs include imposing more stringent pre-treatment permit limits and conditions, and a greater level of regulatory oversight of industrial users.

### **Impact to Other Environmental Programs**

TMDL implementation potentially has far reaching impacts beyond traditional CWA environmental programs. Air emissions for pollutants such as mercury and nitrogen have

already been singled out as the source of impairment for numerous listings across the country, making reductions in these emissions through Clean Air Act (CAA) permits necessary.

Contaminations of sediment in receiving waters from past discharges and releases have also been identified as the source of impairments for some state listings. For these TMDLs, coordination by Navy water managers with Installation Restoration (IR) program efforts will be needed. In addition, Navy CWA programs will need to be expanded to address the legacy contamination not addressed by the IR program. Likewise, groundwater contamination that migrates and contributes to waterbody impairments from Resource Conservation and Recovery (RCRA) corrective action sites and/or Underground Storage Tank (UST) sites may require control and/or remediation beyond that required under their respective regulatory programs in order to meet TMDL allocations. For permitted UST, RCRA and IR remediation discharges identified as contributing to impairments, additional treatment measures may be necessary. Coordination with Safe Drinking Water Act (SDWA) programs may also be necessary where drinking water source waters are listed as impaired, especially where impairments are related to human health impacts.

To fully determine the impacts of TMDLs to other programs and to ensure compliance with the regulatory requirements of numerous programs, coordination between water program managers and other program managers is necessary. Furthermore, due to the complexity, differences, and overlaps of the various programs, the Navy TMDL Discussion Group is available to provide assistance including development of guidance addressing TMDL issues.

## **SECTION C: Which Specific Installations may be Impacted by a TMDL?**

There are many sources that can be used to assess whether a Navy installation may be impacted by a TMDL. Currently, the most appropriate source to use is the Navy TMDL Prioritization Report prepared by NAVFAC in March 2004. This report identifies water bodies receiving Navy discharges that regulatory agencies have listed as impaired, and assigns a priority for each TMDL impact to the Navy.

The Prioritization Report assigns a priority of High, Medium, Low, or No Expected Impact to each TMDL identified as having an impact on an installation. These priorities were based on several factors including TMDL schedules, whether the Navy installation is believed to be a significant contributor to the waterbody impairment, whether the installation's discharge is from a point versus a nonpoint source, and whether the installation is a high profile installation in the waterbody. The report can be used as a first step towards determining an appropriate level of participation, identifying compliance strategies, and requesting necessary funding.

The report will be updated after each state's 303(d) list is submitted to EPA. The most recent update of the report is posted at <https://www.denix.osd.mil/denix/DoD/Working/TMDL/tmdl.html>.

In between prioritization reports, NAVFAC representatives can be consulted for a more updated assessment as to whether particular waterbody impairment is likely to impact the Navy.

## **SECTION D: What are some of the Efforts Currently Being Taken by the Navy?**

Currently, many entities within the Navy are already involved in efforts related to TMDLs.

In May 2001, CNO established a TMDL Discussion Group to facilitate a wider Navy participation and awareness of the potential impacts that TMDLs may have on Navy's operations nation wide. This group has participation from various commands representing a cross-section of Navy commands, including representatives from RECs, regional commanders, major claimants, and various support commands. The Navy TMDL Discussion Group objectives are to:

- Increase Navy-wide awareness of TMDLs and their potential impact on Navy installation operations;
- Identify and prioritize where Navy resources are needed, and shepherd Navy involvement in the development of TMDLs;
- Provide guidance and policy on regulatory, legal, and resources issues;
- Identify, assess, develop, and provide tools, training, and educational/public outreach materials; and
- Assist in coordination of field technical and regulatory support.

NAVFAC is updating the [Prioritization Report](#) of the Navy installations located near impaired water bodies based on state waterbody impairment listings submitted to the EPA in April 2004. This updated report will assist in prioritizing the installations that are most likely to be impacted by a TMDL so that installations can determine an appropriate level of participation, identify compliance strategies, and request necessary funding.

SPAWAR Systems Center San Diego (SSC-SD) is developing Navy-wide technical guidance for developing and evaluating data related to impaired waterbody listings and TMDL development. This guidance will focus on the technical issues associated with the top pollutant impairments identified in the [Prioritization Report](#). The purpose of this guidance is to provide the technical assessment tools and techniques needed to address TMDLs at Navy facilities. Specifically, the technical guidance will help Navy facilities determine how much of a pollutant the installation is contributing and whether the pollutant loadings are fair.

Concurrent Technologies Corporation (CTC) is contracted to provide technical assistance in the TMDL program. Tasks under this contract include:

- Review state impaired waterbody listing methodologies in five states (Virginia, Florida, Washington, Hawaii, and California), provide a brief description of each for use by Navy when conducting TMDL reviews for those states, and identify potential problems or issues with the state's listing process. This will enable facilities to better understand and challenge states' listing methodologies;

- Conduct case studies in up to five states of successful TMDLs. These case studies will provide information on how each state develops and implements a TMDL;
- Review the [DoD Watershed Assessment Protocol](#) document and identify elements that may be incorporated into a Navy TMDL Protocol tool; and
- Develop a prototype TMDL Protocol and Implementation Procedures (TMDL Toolbox) to help Navy facilities carefully and logically evaluate the potential impacts of TMDL related issues on installation operations. Based on that evaluation the TMDL Toolbox will help a facility prepare to minimize the impacts of a TMDL.

The first three bulleted items above are complete and contained in the report titled “[TMDL Process Review Report, Summary of Selected Regulatory Agency Processes and DoD and Navy Documents, September 2004](#)”. The report can be found on the DENIX Navy TMDL Information web page. The last bulleted item, TMDL Toolbox, is currently under development and will be posted on the DENIX Navy TMDL Information web site once complete in mid-2005.

For a more complete listing of efforts within the Navy and DoD, visit the Navy TMDL Information web site at <https://www.denix.osd.mil/denix/DoD/Working/TMDL/tmdl.html>.



## **SECTION E: Who in Navy should be Involved in TMDL Issues?**

Due to the complexity and the resources that may be required to address TMDL issues within the Navy, RECs may consider establishing regional/local TMDL support teams in geographic areas where TMDLs are expected to have significant impacts on the Navy in order to capitalize on expertise and make effective use of the resources.

### **Objective/intention of Regional/local TMDL Support Teams**

The main objective/intention of regional/local TMDL support teams is to facilitate Navy involvement in areas where Navy activities have the potential to be significantly impacted by TMDLs. This involvement is expected to influence the listing and delisting of impaired waterbodies, TMDL development, and resulting pollutant allocations for Navy facilities. Many regulatory and technical issues associated with TMDLs are addressed differently across the nation due to differences in state approaches to water quality management, regional variability between pollutant sources, and varying waterbody characteristics. Regional/local TMDL support teams are recommended since water quality standards, listing methodologies, and TMDLs vary from state to state.

### **Regional/local TMDL Support Team Participants**

The regional/local TMDL support teams should be comprised of water program managers from several organizations in the region to include: the regional environmental coordinator, the regional commander, the installation(s), and NAVFAC (to include Engineering Field Divisions/Activities, Facilities Engineering Commands, the Naval Facilities Engineering Service Center, and/or specialty offices such as the Marine Environmental Support Office). For TMDLs associated with other programs, assistance from, or the addition of experts from those programs (i.e., Installation Restoration, hazardous waste, underground storage tanks, air, and drinking water) is also recommended. Depending on the issues addressed by individual regional/local TMDL support teams, other expertise, such as natural resources, public affairs, and legal counsel should be considered.

## **SECTION F: What can Navy Personnel do to Minimize the Potential Impacts of a TMDL?**

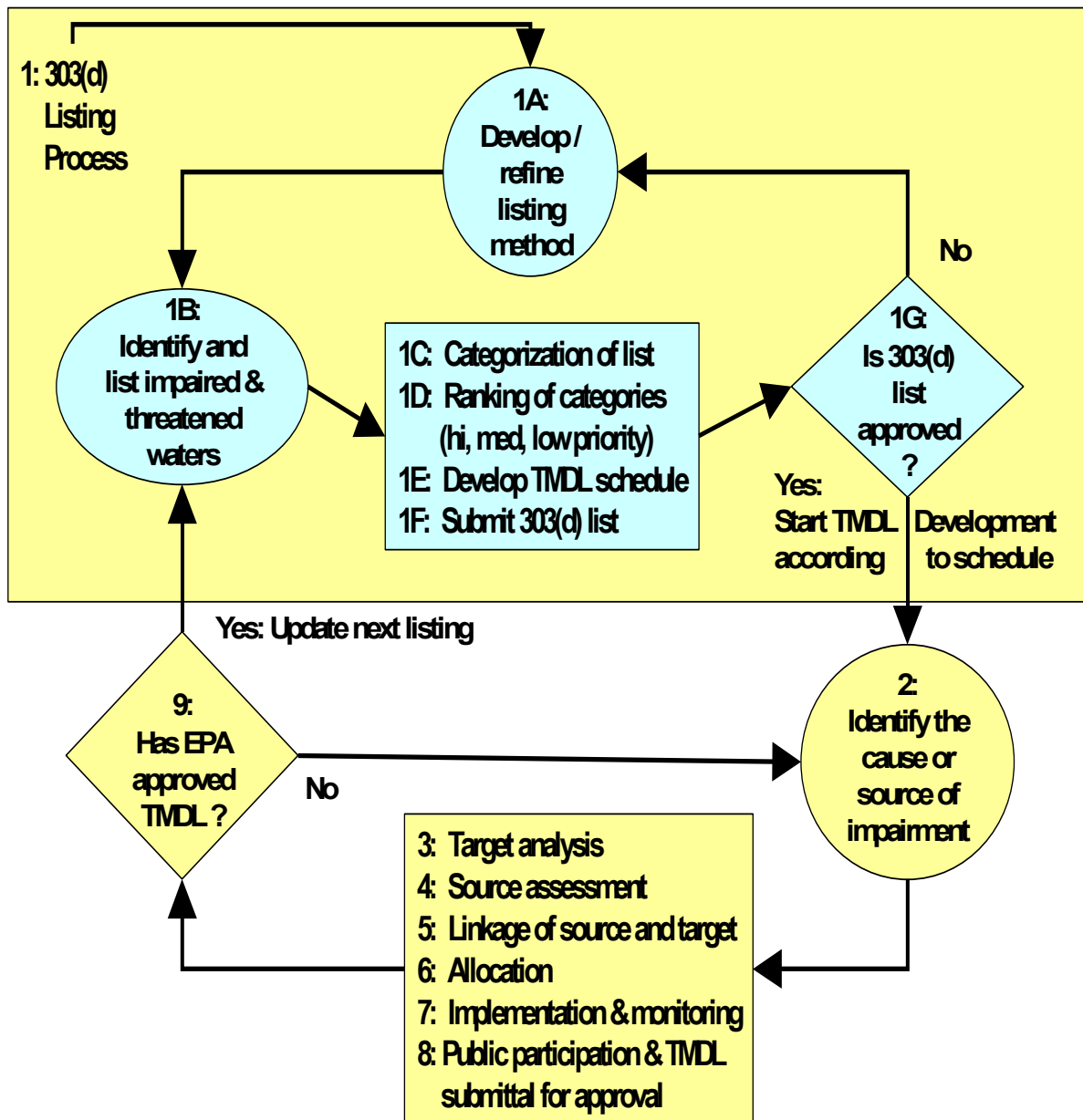
The Navy can develop and employ a process whereby TMDL related problems on Navy installations are identified and actions taken to resolve these problems during the development stages of a TMDL. It is recommended that Navy personnel such as regional/local TMDL support teams or water program managers addressing TMDLs take the following actions:

- 1) Track impaired waterbody listings/delistings and TMDL development;
- 2) Participate in watershed stakeholder groups to gather information, and ensure Navy interests are addressed;
- 3) Seek partnerships with other dischargers in the watershed to share technical information and possibly costs of technical studies;
- 4) Interface with regulators to obtain information necessary to understand agency rationale for waterbody impairment listing and pollutant allocations;
- 5) Attend public meetings and provide comments on draft impaired waterbody listings, TMDLs, TMDL implementation plans and resulting permits;
- 6) Evaluate and implement potential actions to engage the Navy in all stages of the impaired waterbody listing and TMDL development process. This should include engaging and/or informing Navy stakeholders of TMDL development and obtaining their support for the proposed actions;
- 7) Identify the need for sampling, modeling, source identification, load reduction studies, and the like to ensure Navy interests are met. Provide coordination and oversight of the same. Ensure the approach taken in these efforts is agreed upon with regulators and other interested stakeholders prior to initiation of the effort;
- 8) Review information from TMDL projects undertaken by Navy support agencies, provide input, and use this information to look ahead and anticipate impacts the TMDL process will have within the respective region;
- 9) Assist Regional Commanders and Major Claimants with identifying funding needs related to TMDLs in their respective region for inclusion in the environmental budget; and
- 10) Provide routine updates to the Navy TMDL Discussion Group on the progress of the TMDL support team efforts. This can be accomplished by having a member from the TMDL support team participate in Navy TMDL Discussion Group conference calls. For more information on the Navy TMDL Discussion Group teleconference, visit the Navy TMDL Information web site at <https://www.denix.osd.mil/denix/DoD/Working/TMDL/tmdl.html>.

In addition to the actions outlined above, this section provides detailed information on the various steps of a typical state TMDL process and suggests some actions Navy personnel could take at each step. Understanding the various steps of a state's TMDL process can help Navy personnel decide what specific actions the Navy can take to minimize the impact of TMDLs on installation missions, operations, and costs. Navy personnel are encouraged to maintain frequent coordination with their regulatory agencies throughout the listing and TMDL development process and provide new information and data that will help the Navy maintain compliance.

Figure F.1 and Table F.1 lay out the steps of a typical TMDL process, which normally begins with the identification of the impaired waterbodies and ends with the restoration of water quality to state-established standards, and the suggested actions Navy personnel could take during each step.

Figure F.1. Steps of a Typical State TMDL Process



**Table F.1. Steps of a Typical State TMDL Process and Recommended Installation Actions**

<b>STEP 1: 303(d) listing process—Determine name and geographic location of waterbody</b>
<p><b>States would:</b></p> <p>a. Develop listing methodology, which may:</p> <ul style="list-style-type: none"> <li>• Specify the factors used to consider and evaluate the following types of data and information when making listing decisions: Physical/chemical; biological; aquatic and riparian habitat; waterbody impairment and drinking water susceptibility analyses.</li> <li>• Identify the types of information considered to be “existing and readily available” and explain how the following are considered in making listing and priority ranking decisions: data quality and age; degree of confidence in the information used to determine whether waterbodies are impaired or threatened; number and degree of exceedances of numeric or narrative criteria and designation uses used to determine whether waterbodies are impaired or threatened.</li> <li>• Describe the selection factors used to include waterbodies on the list.</li> <li>• Detail the process for resolving disagreements with other jurisdictions involving waterbodies that cross State lines or authorized Tribal or international boundaries.</li> <li>• Describe the method and factors used to assign a priority ranking to waterbodies listed.</li> <li>• Be available for public comment.</li> <li>• Submit to EPA for review and comment, along with a summary of all comments received and the response of the State, Territory, or authorized Tribe to each comment.</li> </ul> <p>b. Identify impaired waters: The list must include all waterbodies that, based on all existing and readily available data and information, are impaired or threatened by individual pollutants, multiple pollutants, or pollution from any source regardless of whether the waterbodies are impaired or threatened by: a pollutant which is unknown at the time of the listing, atmospheric deposition, or point sources, nonpoint sources, or a combination of point and nonpoint sources.</p> <p>c. Separate listing into various categories and rankings, which could be based on types of pollutant causing impairment, human risk factors, and current remediation actions (i.e. watershed approach, technology already in place).</p> <p>d. Develop priority ranking of category requiring TMDL. Priority ranking may include:</p> <ul style="list-style-type: none"> <li>• Assignment of a high, medium, or low priority score to each waterbody and pollutant combination and may take into account the severity of the impairment and the designated uses of the waterbody.</li> <li>• Assignment of a high priority score to waterbodies used as public drinking water supplies and to waterbodies in which species listed as endangered or threatened under Section 4 of the Endangered Species Act (ESA) are present. Also, the presence of sensitive aquatic species and secondary factors such as the historical, cultural, economic, and aesthetic uses of the waterbody may be considered.</li> <li>• Assigning a medium or low priority score to waterbodies having endangered or threatened species present, and have an approved Habitat Conservation Plan or other specific, enforceable mechanism developed in accordance with the Endangered Species Act, as long as the approved plan or other mechanism is specific to the pollutant and the waterbody of concern and demonstrates that water quality standards will be attained or maintained.</li> <li>• An explanation as to how the severity of the impairment and the designated use to be made of the waterbody were considered in assigning each priority ranking.</li> <li>• Consideration of other factors such as efficiencies gained by developing the recreational,</li> </ul>

economic, and aesthetic importance of particular waterbodies; TMDL complexity; the degree of public interest; and State, Tribal, Territorial or Federal policies and priorities. Each additional factor must be identified and how it was used to assign priority rankings must be explained.

- e. Develop schedule for completing TMDLs for all waterbodies.
- f. Submit 303(d) list for EPA approval.
- g. EPA must identify the waterbodies, pollutants, and pollution combination and priority ranking for all or portions disapproved via the *Federal Register* notify the public and request comments.

**Navy personnel could:**

Influence the 303(d) lists, priority ranking, schedule, and methodology process by:

- (1) Reviewing and commenting on State's 303(d) listing methodologies, State's water quality assessment data (including any models used to predict water quality impacts), 303(d) list, State's priority rankings, schedule for TMDL development, and draft TMDLs (including the accompanying Implementation Plan). States may allow at least 30 days for comment.
- (2) Tracking EPA's approval or disapproval of 303(d) listings for States with a Navy presence. EPA must approve or disapprove each State listing, typically within 30 days of receipt. EPA must identify the waterbodies, pollutant and pollution combination and priority ranking for all disapproved portions typically within 30 days via the *Federal Register* notify the public and request comments for at least 30 days.
- (3) Tracking respective State's 303(d) listing methodologies and submit comments during the 303(d) listing public comment period.
- (4) Using the priority rankings and schedules to determine State's timeline for developing TMDLs for the waterbodies and to:
  - i. Determine the urgency for participation in the TMDL development process.
  - ii. Identify data gaps, projects, and funding needs to better define an installation's contribution to the waterbody impairment.

**STEP 2: For the category of 303(d) list requiring TMDL—Identify impairment/problem**

**States would:**

Highlight and clarify the key factors and background information for a listed waterbody and pollutant combination (303(d) listing), and describe the nature of the impairment and context for the TMDL.

**Note:** At this step, an approach for developing the TMDL is usually defined.

**Navy personnel could:**

Review State's approach/strategy for developing TMDLs to determine the regulators priority and schedule. Many States tend to focus on a specific category of pollutant due to resource constraints. This could be used to prioritize the installation's projects and funding resources, to get involved in stakeholder groups, and to determine if the State is using all data/information and whether the data/information is of poor quality. Did the State follow its listing methodology? Was the listing based on adequate data, good quality data, and/or recent data? Provide analytical data (water quality and sediments) to the State to assist in TMDL development. If data was insufficient, Navy personnel should ask whether the waterbody should have been listed under a different category instead of the one requiring a TMDL. Determine whether the water quality standard is appropriate for the waterbody in question. Should the use designation be changed? Should site-specific water quality criteria be developed?

### **STEP 3: Target analysis**

**States would:**

Quantify the pollutant load that may be present in the waterbody to ensure attainment and maintenance of water quality standards. This would involve defining the relationship between designated uses, numeric measures of success, and pollutant loading. The goals are to: a) clarify whether the ultimate goal of the TMDL is to comply with a numeric water quality criterion, comply with an interpretation of a narrative water quality criterion, or attain a desired condition that supports meeting a specified designated use; b) identify the waterbody's critical conditions; c) identify appropriate ways to measure (track) progress toward achieving stated goals; and d) tie the measures to pollutant loading.

Part of the analysis is to determine the maximum allowable pollutant load and the reductions needed to achieve the allowable load.

**Navy personnel could:**

Use the magnitude of load reductions to predict the amount of load reduction that could be required for the Navy installation and the potential allocations that could be assigned for the various activities on the installation. This is another factor that could be used in prioritization of installation's projects and funding resources. Is the State-identified target appropriate? Is there a translator for narrative criteria, or is there a site-specific standard? Should the waterbody use designation be changed? Are the models used to determine the loads appropriate? In addition, during a State's Triennial Review, Navy personnel could review the water quality standards. It all begins with setting of standards; the more stringent the standard, the more likely a waterbody cannot meet them and will be listed as impaired.

### **STEP 4: Source assessment**

**States would:**

After step 3 is completed, identify, list and characterize source categories, source subcategories, or individual sources of the pollutant that are responsible for waterbody impairment. Under this stage, source types, locations, magnitude of loads, and transport mechanisms are all determined.

**Navy personnel could:**

Do an independent assessment at this point to ensure that all sources of the pollutant were considered/accounted for, the State's discharge loadings are accurate, and that discharge variabilities were accounted for.

### STEP 5: Linkage of source and target

**States would:**

Establish the relationship between the pollutant loads identified under Step 4 and the in-stream water quality target identified under Step 3, estimate the degree actual loads exceed allowable loads and degree of pollutant reduction needed to meet WQS.

**Navy personnel could:**

Use this information to forecast if and which installation's discharge may be targeted for further reduction.

### STEP 6: Allocation

**States would:**

Use technically feasible and reasonable division of the allowable load among sources (point and nonpoint).

**Navy personnel could:**

Influence the allocation process by becoming active in allocation decision-making. This would include participation in stakeholder groups, attendance at public hearings, and one-on-one interface with regulators. Present data upfront on installation's contribution. Check whether models, if used, are appropriate, and whether there is enough data to make an allocation decision. Question whether the reductions required are feasible, and whether the nonpoint source reductions share the economic burden fairly among dischargers. Check whether the margin of safety is too high, including whether the allowance for future growth is too high.

### STEP 7. Implementation and monitoring plan

**States would:**

Include in its plan a) actions/management measures required to implement the allocations; b) time line for tracking actions; c) assurances that actions will occur; d) legal or regulatory controls under which implementation will occur; e) estimated time required to attain water quality, f) monitoring/modeling plan design to determine effectiveness of actions; g) milestones that will be used to measure progress, and h) the circumstances under which TMDLs will be revised.

**Navy personnel could:**

Use this information to determine what the WLA and/or LA would be for an installation and the actions/measures required to achieve the amount of reduction. This information can help the installation design a compliance plan. Determine if the time allotted to comply with the discharge reductions is reasonable, and whether any monitoring imposed as part of the TMDL implementation is appropriate.



**STEP 8: Public Participation in review of TMDL****States typically:**

Give the public at least 30 days to review and comment on a TMDL before it is submitted to EPA for approval.

**Navy personnel could:**

Review and comment on the TMDL during the public review process.

**STEP 9: TMDL submittal for EPA approval****States would:**

Submit TMDLs to EPA for approval. If EPA disapproves a TMDL, EPA is required to develop a TMDL typically within 30 days and release it for public comment.

**Navy personnel must:**

Comply with new requirements.

**STEP 10: Execute implementation and monitoring plan**

This TMDL process is repeated until the water quality is restored and the waterbody is removed from the 303(d) list.